

Having thus described the preferred embodiments, the invention is now claimed to be:

1. A vehicle load-carrying bed comprising:
a generally rectangular bed floor;
a front wall extending upwardly adjacent a front edge of the bed floor;
a first side wall extending upwardly adjacent a first side edge of the bed floor;
a second side wall extending upwardly adjacent a second, opposite side edge of the bed floor;
a tailgate positioned along a rear edge of the bed floor and extending between the first and second sidewalls,
a dual axis hinge pivotally connecting the tailgate to the first side wall for movement about a first axis generally parallel with the rear edge of the bed floor and alternative movement about a second axis generally parallel with a vertical bed edge of the first side wall, the hinge including a checker for urging the tailgate into preselected positions when the tailgate is moved about the second axis.

2. The vehicle load-carrying bed of claim 1 wherein the checker includes a torsion spring and at least one rotatable cam for engagement with the torsion spring when the tailgate is opened in the swing-open direction, the preselected positions determined by the shape of the cam.

3. The vehicle load-carrying bed of claim 1 wherein the dual axis hinge includes:

a body bracket assembly connected to the first sidewall;
a tailgate bracket assembly connected to the tailgate, the tailgate bracket assembly pivotally connected to the body

bracket assembly about the first axis and pivotally connected to the body bracket assembly about the second pivot axis.

4. The vehicle load-carrying bed of claim 3 wherein the body bracket assembly has a base portion having throughholes for bolting to the first sidewall.

5. The vehicle load-carrying bed of claim 3 wherein the tailgate bracket assembly has an angled bracket with a first leg portion having throughholes for bolting to the bottom edge of the tailgate and a second leg portion having throughholes for bolting to the first lateral edge of the tailgate.

6. A dual mode hinge assembly for use with a dual mode tailgate, the dual mode hinge assembly comprising:

- a body bracket assembly mounted to a sidewall defining a vehicle load-carrying bed;

- a tailgate bracket assembly mounted to a tailgate that extends across an open edge of the vehicle load-carrying bed;

- a first rotatable connection between the tailgate bracket assembly and the body bracket assembly having a first pivot axis generally parallel with a bottom edge of the tailgate; and

- a second rotatable connection between the tailgate bracket assembly and the body bracket assembly having a second pivot axis generally parallel with a lateral edge of the tailgate.

7. The dual mode hinge assembly of claim 6 further including:

a rotatable member between the body bracket assembly and the tailgate bracket assembly, the rotatable member pivotally connected to the body bracket assembly about the first pivot axis to form the first rotatable connection and pivotally connected to the tailgate bracket assembly about the second pivot axis to form the second rotatable connection.

8. The dual mode hinge assembly of claim 7 further including:

a first pivot pin extending through the rotatable member along the first pivot axis and rotatably secured to the body bracket assembly; and

a second pivot pin extending through the rotatable member along the second pivot axis and rotatably secured to the tailgate body bracket assembly.

9. The dual mode hinge assembly of claim 8 further including:

bearings between the first pivot pin and the body bracket assembly and between the second pivot pin and the tailgate bracket assembly.

10. The dual mode hinge assembly of claim 8 wherein the body bracket assembly has a U-shape for receiving the rotatable member and supporting the first pivot pin and the tailgate bracket assembly has a U-shape for receiving the rotatable member and supporting the second pivot pin, the rotatable member having a cross-sectional shape that cooperates with the U-shapes of the body bracket and tailgate bracket assemblies to limit simultaneous movement of the tailgate about the first and second pivot axes.

11. The dual mode hinge assembly of claim 7 further including:

a first cam on the tailgate bracket assembly; and

a torsion spring on the rotatable member positioned to be engaged by the cam when the tailgate is moved about the first pivot axis.

12. The dual mode hinge assembly of claim 11 wherein the cam is rotatably mounted on the tailgate bracket assembly.

13. The dual mode hinge assembly of claim 12 further including:

a second cam rotatably mounted on the tailgate bracket assembly and adapted to engage the torsion spring when the tailgate is moved about the first pivot axis.

14. The dual mode hinge assembly of claim 13 wherein pins are used to rotatably mount the first and second cams to the tailgate bracket assembly.

15. The dual mode hinge assembly of claim 11 wherein the torsion spring is candy-cane shaped, a short portion of the torsion spring is engaged by the first cam and a long portion affixed to the rotatable member.

16. The dual mode hinge assembly of claim 7 wherein the rotatable member has a body portion through which the first and second pivot pins extend and a arm extending from body portion, a torsion spring is attached to a distal end of the arm and is engaged by a cam on the tailgate bracket assembly when the door is moved about the first pivot axis.

17. The dual mode hinge assembly of claim 16 wherein the cam is a pair of rotatably mounted cams having cam surfaces, the cam surfaces are shaped such that the engagement between the torsion spring and the cam surfaces urges the tailgate into specific predetermined positions when the tailgate is moved about the first pivot axis.

18. A tailgate assembly adapted to be mounted along an open edge of a vehicle's load-carrying bed wherein the tailgate is able to alternatively pivot about (1) an axis generally parallel with a bottom edge of the tailgate for movement between a closed position and a fold-open position and (2) an axis generally parallel with a lateral edge of the tailgate for movement between the closed position and a swing-open position, the tailgate assembly comprising:

- a tailgate selectively closing an open end of an associated vehicle load-carrying bed;

- a dual mode hinge assembly mounted to the tailgate adjacent a corner of the tailgate formed at an intersection of a bottom edge of the tailgate and a first lateral edge of the tailgate;

- a first selectively operable hinge mounted to the tailgate adjacent a corner of the tailgate formed at an intersection of the bottom edge of the tailgate and a second lateral edge of the tailgate, the first selectively operable hinge cooperating with the dual mode hinge assembly to pivotally support the tailgate about a first pivot axis;

- a second selectively operable hinge mounted to the tailgate adjacent a corner of the tailgate formed at an intersection of a top edge of the tailgate and the first lateral edge of the tailgate, the second selectively operable

hinge cooperating with the dual mode hinge assembly to pivotally support the tailgate about a second pivot axis.

19. A dual mode hinge assembly for use with a dual mode tailgate, the dual mode hinge assembly comprising:

a body bracket assembly mounted to a sidewall defining a vehicle load-carrying bed;

a tailgate bracket assembly mounted to a tailgate that extends across an open edge of the vehicle load-carrying bed;

a rotatable member between the body bracket assembly and the tailgate bracket assembly, the rotatable member pivotally connected to the body bracket assembly and pivotally connected to the tailgate bracket assembly, the tailgate bracket assembly and the rotatable member together moveable relative to the body bracket assembly about a second pivot axis to move the tailgate in a fold-down direction, the tailgate bracket assembly moveable relative to the rotatable member about a second pivot axis to move the tailgate in a swing-open direction.

20. The dual mode hinge assembly of claim 19 wherein the rotatable member includes a biasing member and the tailgate bracket assembly includes first and second rotatably mounted cams that engage the biasing member when the tailgate is moved in the swing-open direction.

21. The dual mode hinge assembly of claim 19 wherein a first pivot pin pivotally connects the rotatable member to the body bracket assembly and a second pivot pin pivotally connects the rotatable member to the tailgate bracket assembly.